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24 June 2022

Dear Eleanor

Locational Pricing Assessment

Waters Wye Associates (WWA) works for a large number of energy companies in the GB electricity market. As I noted in my e-mail to Ofgem, WWA has concerns that the workshop held had very limited industry attendance (I understand it was by invite) and this potentially critical issue has not been widely flagged to the market. As a result many parties will not have seen the document or had time to respond.

Having circulated the document more widely, I have gathered together the views that have been shared with WWA which I hope is helpful. I did get a lot of comments that the slides suggest that the case for change has been made, but parties are not convinced it has. They agree there is an issue with constraints and constraint costs, but not that the charging regime will resolve that.

The key opportunities associated with introducing more granular locational pricing in GB

WWA did not get any positive feedback around this proposal, except to say that parties understood why economic theory would suggest this is an economic and efficient way to charge for transmission access. It was also noted that the markets where it is used are mainly smaller than the GB market and have more flexible generation. One party commented, “if you were not starting here then it could work”.

Parties also did not know from the high-level descriptions if it would be good for their business. As with all charging changes there are winners and losers, and winners tend to be supportive.

WWA did get a lot of concerns raised about the impact of LMP:
Pricing signals are only useful if parties can respond to them which in the case of new connections is extremely limited, evidence by the lack of new build in negative TNUoS zones over the last 2 decades.

Locational pricing seems to run counter to wider HMG policy, for example the desire for all plant to be decarbonisation ready, renewables targets, hydrogen and CCUS support. To

achieve the goals in the British Energy Security Strategy the market needs TOs to build capacity where the resources are not try to relocate assets.

Granular pricing risks worsening liquidity in an already very illiquid market.

While Ofgem is looking at this what is being done to just build more transmission capacity? The focus on constraint costs is not addressing the fundamental issue that capacity needs to be built far faster and in the places parties are building. Connection offers now are regularly for 2030, which will never help with net zero targets.

We already have a TNUoS review going on, the DNOs are implementing the SCR, REMA is expected, UK ETS is altering, and now this? The concerns split into parties' own ability to cope with all the changes and more widely the markets ability to undertake investment when the background is shifting so much. There was also a feeling that we need to know what REMA proposes before we go down more rabbit holes.

These are charges for using a monopoly network. Where assets paid to connect and now find the TO's network cannot accommodate them, it is undermining the parties' rights if the TOs can potentially double their charges for system access. Monopoly charges should be stable and predictable, if LMP does not do that it is not the right answer.

Will I need someone trade capacity as well as energy? We saw in gas when trading was introduced at the beach the liquidity all moved to the NBP. This suggested that it did not deliver improved efficiency of asset use.

The case for change seems to start with changing the pricing of transmission rights, but the problem is constraints. Should the focus not be on the investment signals that Ofgem has sent to the TOs under their price controls that have resulted in this serious lack of capacity? It is a failure of regulation that is the issue, not how we price the limited capacity we have. Where is the strategic investment we already know we need?

The slides talk about a move to zonal pricing, but we have zonal pricing, what is different? And how is Ofgem moving from "charges must be cost reflective" to "charges need to signal scarcity"?

In gas Ofgem have moved to postage stamp pricing. Why is electricity different? Note there are also gas constraints, as recent changes around Milford Haven capacity has illustrated, so it is not clear that it is different and Ofgem should explain why they think it is.

Undertaking a change of this magnitude given the scale of the investment required to reach net zero and the perilous state of GB capacity margins appears reckless, it would take years to deliver and still may not fix the problem of meeting the energy trilemma meanwhile investment stops.

The amount of capacity in a region is outside parties' control. They can therefore connect in a region with low cost capacity and in 10 years find costs have doubled. In capital intensive sectors, where assets last over 20 years this is not helpful. You only make a location decision once, operations for decades should not be undermined by regulated monopolies.

A big driver for nodal pricing seems the desire to reduce constraint costs. However, we think NGESO could go along way towards reducing these costs by giving dispatchable generation a TNUOS discount to not generate into a constraint. This could be managed a number of ways, e.g. by real time or advance market notices but it relates to the point that currently there is no distinction for generation TNUoS in constrained areas based on dispatchability. A good example is where Peterhead is brought on because it is in merit with reference to the system price but because there is a constraint it gets bid off with the cost socialised across all users. Bringing in nodal pricing simply to try and stop this seems a bit like 'a sledge hammer to crack a nut' approach.

It is very unclear how nodal pricing or other charges result in the investment signals that are needed. How is Ofgem is going to get the TOs to make more timely investment give they directly regulate them? We note that Hinkley has blocked all other connections in the region for over a decade. These sorts of practical issues need to be addressed as well as how you charge for the limited assets that we have.

We've got so much else to deliver, how can we guarantee that a market redesign isn't a distraction and misallocation of key resource? We only have finite resource to create industry delivery bodies, and I've seen no analysis to show how this change programme creates benefits that outweigh the risks of non-delivery of other programs (FSO, codes & governance, etc.). Or put it simply, what is the counterfactual?

The key implementation challenges, risks and mitigations

WWA has had many parties share their concerns over the impact on investment. For example, parties in Scotland have significant concerns that existing investments will be undermined and new investments paused as LMP would make them uneconomic. The lack of understanding about what it may do to businesses may also pause investment in things like hydrogen conversion, CCUS, etc. as without knowing what these charges look like the investment may be uneconomic.

There is a general concern that NGESO has a very poor track record in delivering IT (parties note EBS, EMR portal, etc.) and therefore this is a project that could drag on, cost millions and never deliver. NGESO would need to be more transparent about the likely changes to the BM systems that nodal pricing would need and how practicable they are and time to implement. EBS was meant to save a lot of money but was never implemented for practical reasons and the complexity and inflexibility of the legacy systems. Could nodal pricing follow a similar path where it's started but then wastes £200m in poor implementation?! NGESO's ability deliver features in all comments we got.

At a time of increasing energy bills, adding to customer bills (for example pushing up CfD costs in constrained regions) and increasing regional price divergence may not be welcomed. However, if you do not include customers you would theoretically only get half the benefits. Given the cost of living crisis it is difficult to see that this is politically a good change in policy.

A number of parties commented that it would seem likely to be politically unacceptable in Scotland given it would reduce all incentives to invest in Scotland while the market remains so constrained. There was a widely held view that connect and manage was

only meant to see the manage part go on until TO capacity was delivered, and delivery should be the main focus. Parties also pointed to all the offshore wind expected of Scotland and this policy would directly undermine those investments. If wind is not built what is delivering net zero?

Given the time it will take to do LMP, are there not far faster changes that could be made to alleviate constraints? For example, using storage or contracts to take come plant off the system for a while. NGESO is starting to think about this, but it needs to be quicker to make changes while the network investment catches up.

Nodal pricing adds significant risk to a developer as they become beholden to local changes in the generation mix, transmission capacity and local demand. Currently from a developer's view these are aggregated at a national level but it becomes much harder for a developer to model at a node and this risk has to be priced in, potentially risking no development or only at very high prices that then need recovering through higher SRMC. Monopolies should be facilitating net zero and competition not be a barrier to it.

Costs to change systems internally and externally to be able to execute, allocate, nominate and power hedges / trades at multiple nodes instead of at a single notional point will be very expensive. Smaller parties, such as those in ancillary services and the CM can have over 50 assets all of which would need to be optimised.

Ofgem need to assess if the land is there for plants to locate on. For example, the South West has always had negative TNUoS and yet only Langage has been built in the region in 20 years, even then that is more South than South West. The UK does not have vast amounts of land where power plants can locate so this seems relevant when setting signals, in fact they usually build where plants were previously built.

The proposed approach to modelling zonal and nodal market designs

The power market has many DNO connected plant competing with TO plant, so there is a need to consider where you have LMP and where you do not, and what that does to competition in the relevant markets.

There is a need to look at the trade-offs. LMP should reduce congestion costs, but does that mean the UK does not hit its net zero carbon targets until later, or risks security of supply? These wider impacts need to be considered.

There is no reason not to have central despatch and the zonal pricing we have now, we had the Pool under the current regime. These should therefore be assessed separately. It is not a package that has to go together.

On longer term impacts, the "efficient location" needs to consider efficiency overall, not just for the TOs. If the plant is near the customers or near the energy source, those are trade offs, and they need to be costed.

Generators' location is clearly not providing signals for investment in transmission networks. A more fundamental review is needed as to whether the TOs should be making significant investment before generation even asks to connect. For example, in light of the wind targets, have the TOs tripped their investment plans to manage that wind

or are they waiting for the wind farms to get through the CfD process before starting? Nothing in LMP will make the TOs investments faster. So would significant investment allow for no change in charges as an alternative solution?

There must be a concern that the slides do not consider the customer impacts. What about social justice? Is it right customers are asked to relocated to get cheaper energy bills?

They need to consider the impact on the industrial strategy and associated levelling up agenda. Will these proposals make some industrial customers pay far more than others, if so where and across which sectors? There is too much focus on domestic bills and not enough on industrial competitiveness, domestically and internationally.

The FTI slides show impacts on CfDs, but not on say CCUS, solar or other forms of generation. All parties and technologies need to be considered.

Cross border competition needs to be in the assessment. Until the gas crisis caused by the tragic Ukraine war, EU generation has been historically cheaper. The LE1 constraint would limit generation from the EU and that needs to be addressed as a node in the same way as if it were a generator, and not part of the transmission network. Distortions of this type on boarders would have to be addressed.

Ofgem need to look at the whole investment decision of an investor to understand that the nodal price may be irrelevant. A full investment model will be guessing the transmission charge at the financial close as it is too far out to "know", so they need it to predictable. Unless the investor has a longer term view of the nodal price it would be unable to use current prices to inform investment decisions. Instead fuel, land, speed of connection, etc. will be for more important drivers for investment decisions. They risk spending a lot of money to create a 'signal' no one takes notice of.

The modelling should look at all FES scenarios. The two chosen look like the most optimistic, especially in light of the impact on investment likely if these changes are progressed. To get to net zero we need a huge investment in new generation and demand, but at the current time the TOs are offering connections past 2030, so Steady Progression looks most realistic and could be used as the baseline.

It is unclear how the reduction in liquidity will be modelled into the prices that come from LMP. The current market is not efficient due to low liquidity and it seems likely to get worse under LMP.

I hope these are helpful and very happy to discuss further.

Yours sincerely

Lisa Waters
Director